

[illegible]

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1 ATG GCG GAT ACA GCT AGA GGA ACC CAT CAC GAT ATC ATC GGC AGA GAC CAG TAC CCG ATG 60
1 M A D T A R G T H H D I I G R D Q Y P M 20

61 ATG GGC CGA GAC GGA GAC CAG TAC CAG ATG TCC GGA CGA GGA TCT GAC TAC TCC AAG TCT 120
21 M C R D R D Q Y Q H S G R G S D Y S K S 40

121 AGC CAG ATT GCT AAA GCT GCA ACT GCT GTC ACA GCT GGT GGT TCC CTC GTT GTT CTC TCC 180
41 R Q I A K A A T A V T A G G S L L V L S 60

181 AGC GTT ACC CTT GTT GGA ACT CTC ATA CCT TTG ACT GTT GCA ACA CCT CTC CTC GTT ATC 240
61 S L T L V C T V I A L T V A T P L L V I 80

241 TTC AGC CCA ATC CTT GTC CCG GGT CTC ATC ACA GTT GCA CTC CTC ATC ACC GGT TTT GTT 300
81 F S P I L V P A L I T V A L L I T G P L 100

301 TCC TCT GGA GGG TTT GGC ATT GCG GCT ATA ACC GTT TTC TCT TGG ATT TAC AAG TAC GCA 360
101 S S C G F G I A A I T V F S W I Y R Y A 120

361 ACG GGA GAG CAC CCA CAG GGA TCA GAC AAG TTG GAC AGT GCA AGG ATG AAG TTG GGA ACC 420
121 T G E H P Q G S D K L D S A R H K L G S 140

421 AAA GCT CAG GAT CTC AAA GAG AGA GCT CAG TAC TAC GGA CAG CAA CAT ACT GGT GGG GAA 480
141 K A Q D L K D R A C Y Y G Q Q H T G G E 160

481 CAT GAC CGT GAC CGT ACT CGT GGT GGC CAG CAC ACT ACT TAA
161 H D R D R T H G G Q H T T

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1. The first part of the paper is devoted to the study of the asymptotic behavior of the solutions of the system (1) as $t \rightarrow \infty$. It is shown that the solutions of the system (1) tend to zero as $t \rightarrow \infty$ if and only if the matrix A is stable.

[illegible]

FIGURE 2B

1651 TGT ACT GAA TCT GGA CAG AAC CTC TGT CTC TGT GAA GGA TCT AAC GTT TGT GGA AAG GGA 1710
 184 C T F S G O N L C L C E G S N V C G K G 201
 1711 AAC AAG TGT ATC CTC GGA TCT AAC GGA AAG GGA AAC CAG TGT GTT ACT GGA CAA GGA ACT 1770
 204 N K C I L G S N G K G N Q C V T G E G T 223
 1771 CCA AAC CCA GAA TCT CAC AAC AAC GGA GAC TTC GAA GAA ATC CCT GAA GAA TAC CTC CAG 1830
 224 P N P E S H N N G C F S E I P E E Y L Q 243
 1831 TAA gtcgactctagacggatctcccgatcgttcaadccatttggcaataaaglllcttaagattgaatcctgttgcgggt 1808
 244 * 244
 1910 cctggcgtatgattatccatataaattccgrrgattacgttaagcstgttaataatttaacatgttaatgcatgaogtatttat 1989
 1990 gagatgggtttttatgattagagtcccgcatttatacatttaatacggatagaaaacaaatatagcgcgtgaaaactagg 2069
 2070 ataaattatcgccgcgggtgtcatctatgttaclayatcggaaattc 2115

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FIGURE 3

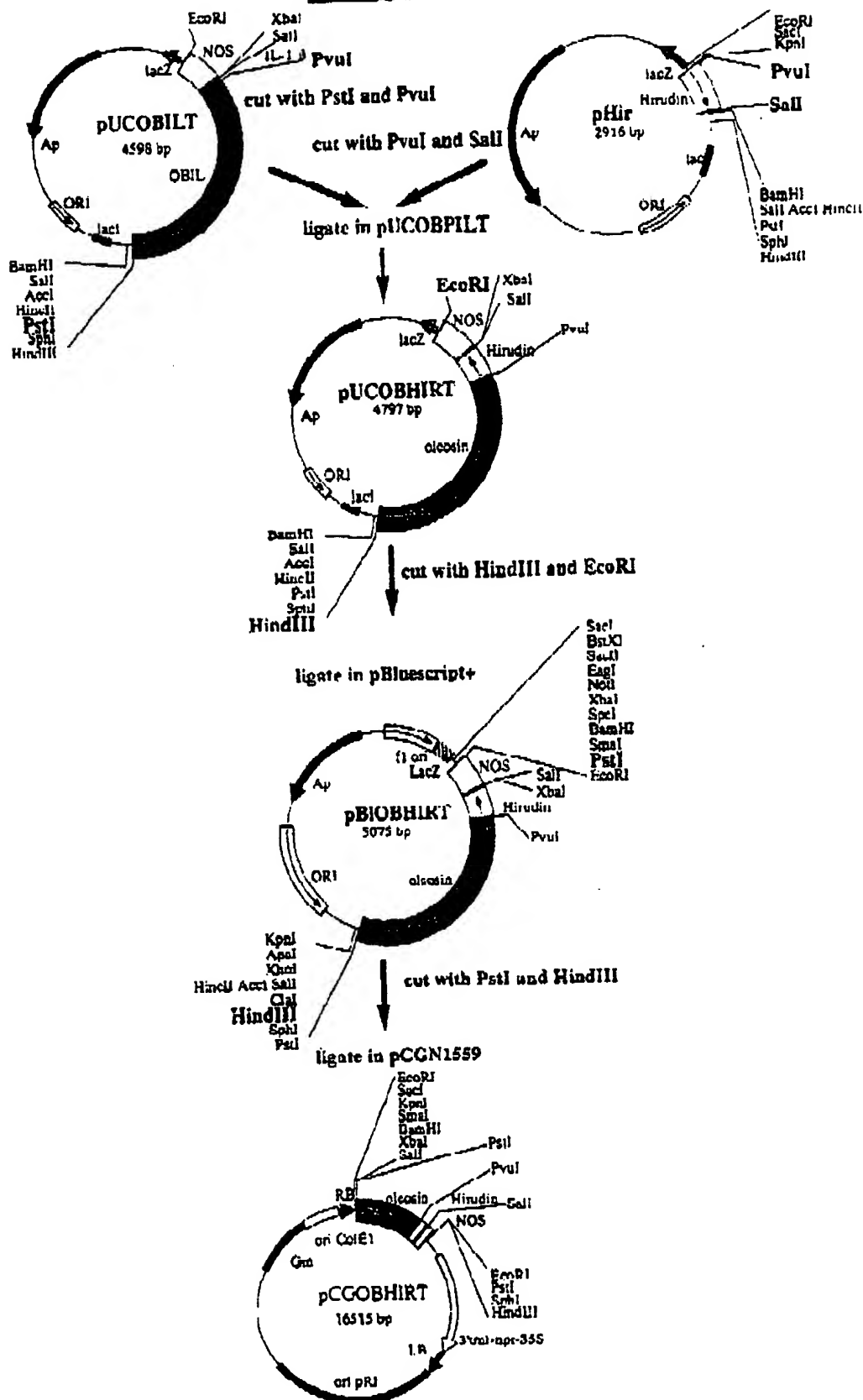


FIGURE 4

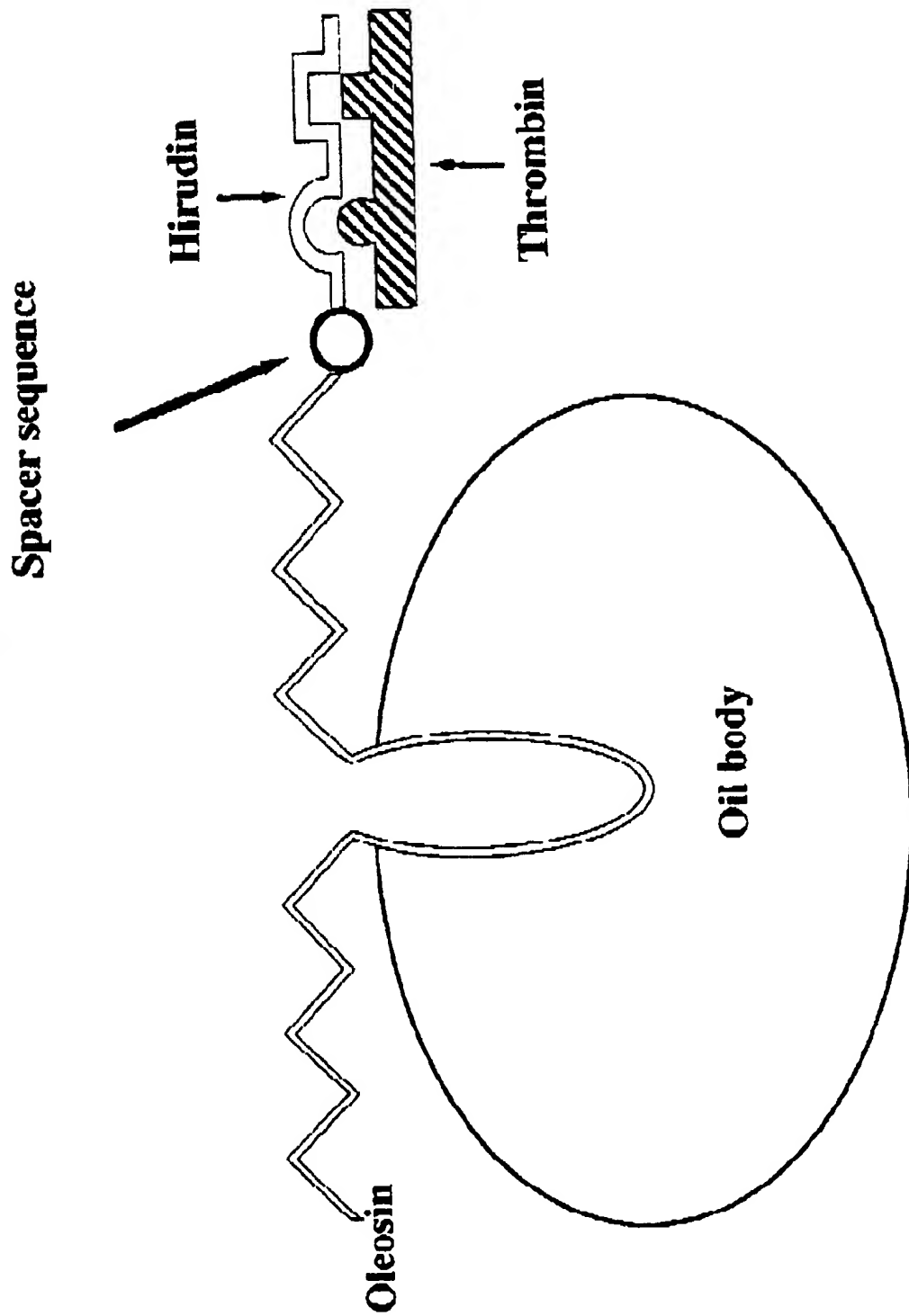


FIGURE 5

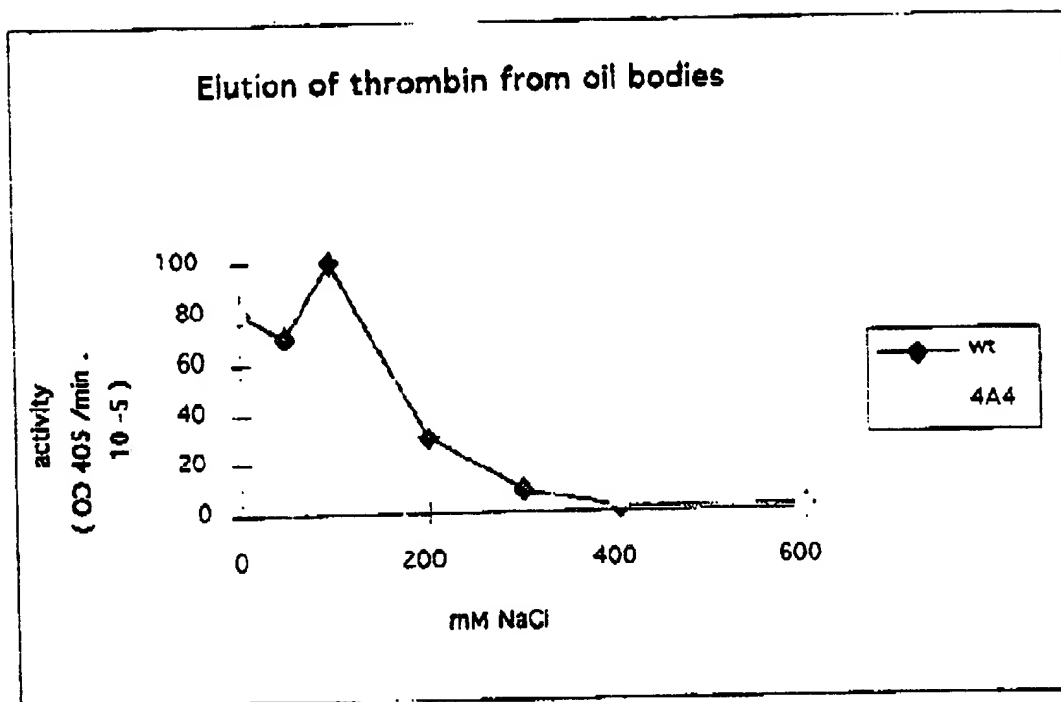


FIGURE 6

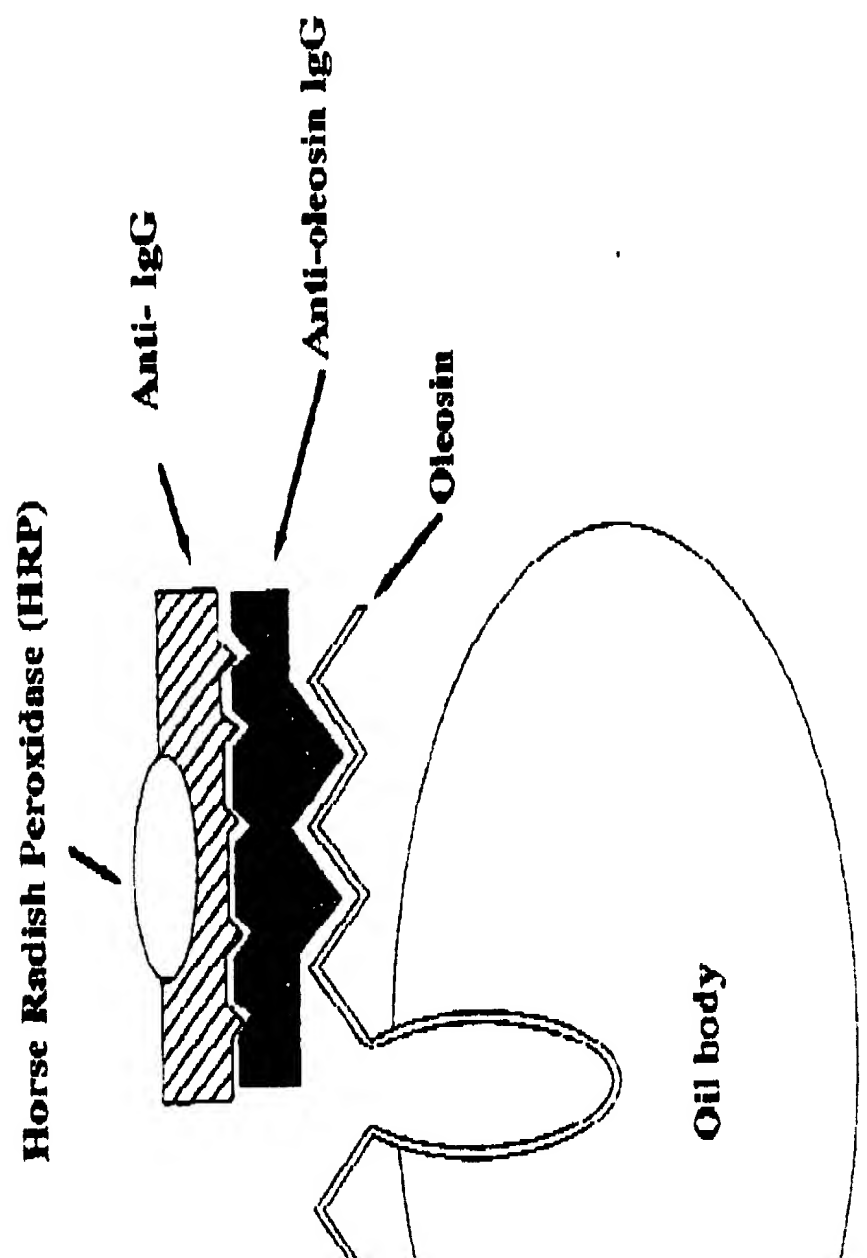


FIGURE 7

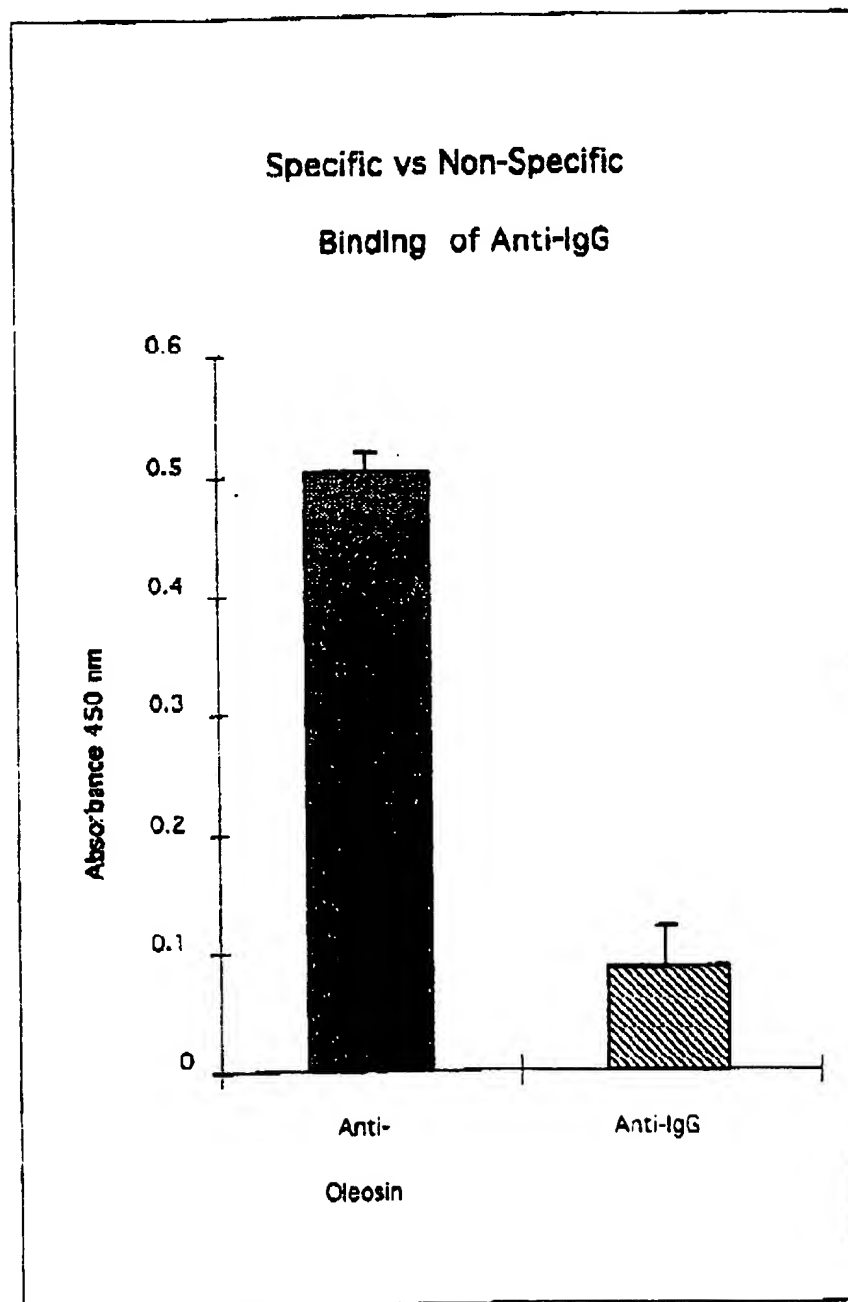


FIGURE 8B

1713 TGC GCC GGC TGC TGC AAG TGC AAA CAG TGC AAA TGC ACC TCC TGC AAG AAA AGC TGC TGC 1772
 208 C A G D C K C K E C K C T S C K K S C C 227
 1773 TCC TGC TGT CCT GTG GGC TGT GGC AAG TGT GGC CAG GGC TGC ACC TGC AAA GGC GGC TCC 1832
 228 S C C P V G C A K C A Q G C I C K G A S 247
 1833 GAC AAG TGC ACC TGC TGT GGC TGA GGGCCGGGAGCCCTGCAGAAAGAGTTCGAAGATGGTCTGTGACGAAG 1904
 240 D K C S C C A * 255
 1905 ttagttgggtgtttttatgggaactttgtttaagcttgttaattgtggaagaacgtglyycttctg-gggttttttaaatgttg 1984
 1985 tgaataaagatgttttcttttggattcaacttagtatttttccatttggtttcatggttttagcacacaacatttttaaatatg 2064
 2065 ctlyttagatgatattgttgcctgttttattatttacttacccttacccttcagttttcaaatgttgttgcaatgactcctgtgt 2144
 2145 agtttaagatcagtggaagttagatttttgtctatatttatttaggggtatttggatattgttaattggttaaacatgylttatga 2224
 2225 cagtggtacttttttgggttatgtgttgacgttlltttttaaacatttatagtagcgttcttgggtgtgttcatcgtgtga 2304
 2305 acnaagyyuacacttaacttggagatggtgtttccacttgatatttgaacaaagaattcgggtacc 2366

09707167 440700

1. The first part of the paper is devoted to the study of the properties of the function $f(x)$ defined by the equation $f(x) = \int_0^x f(t) dt$. It is shown that the function $f(x)$ is continuous and differentiable on the interval $[0, 1]$. The derivative of $f(x)$ is equal to $f(x)$ itself. This implies that $f(x)$ is an exponential function. The initial condition $f(0) = 1$ determines the function uniquely as $f(x) = e^x$.

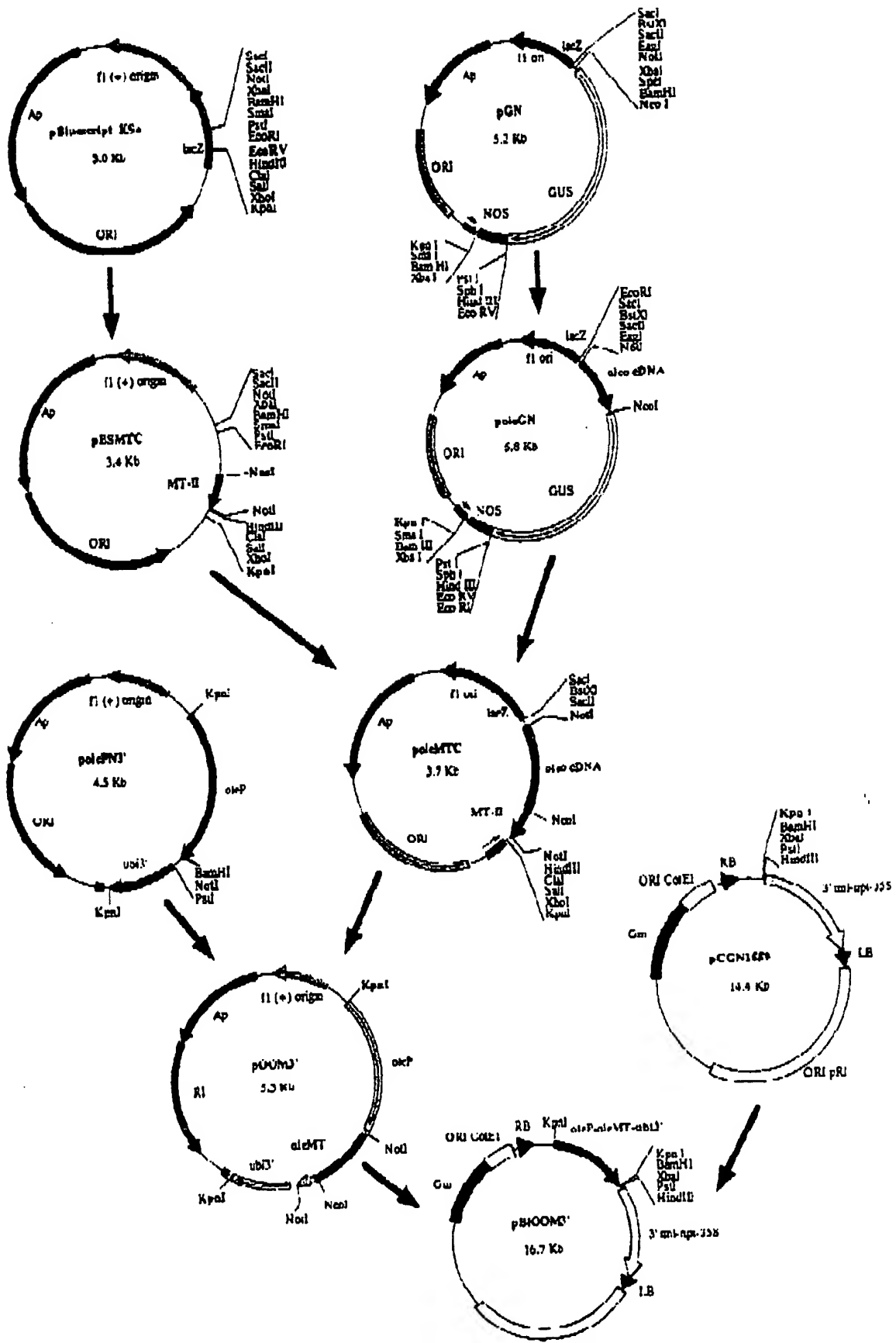
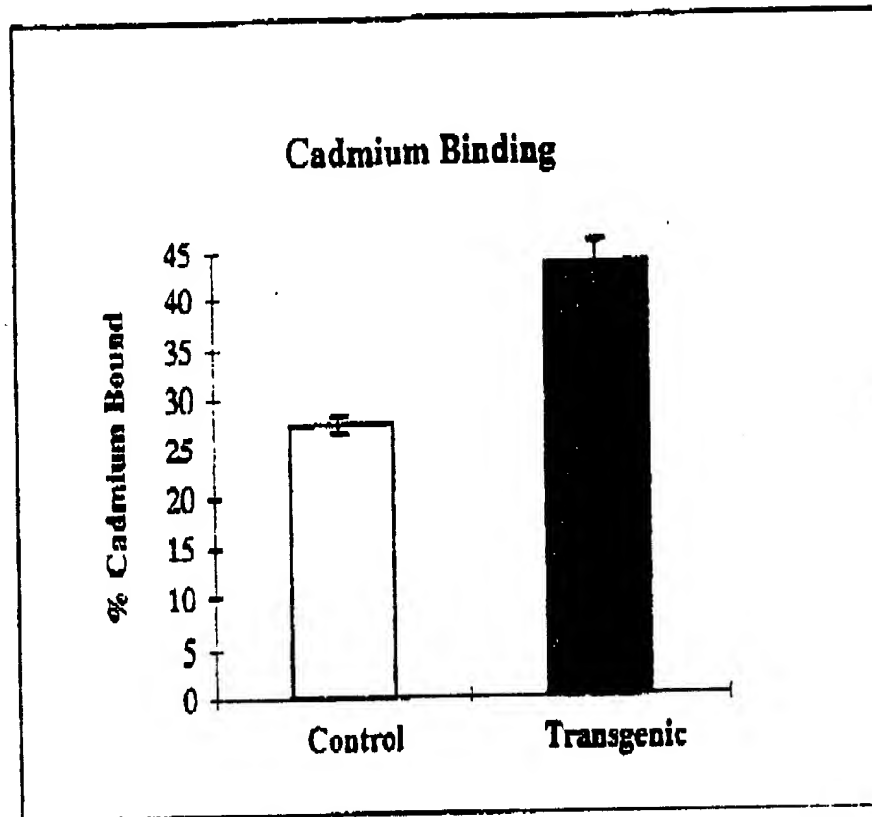


FIGURE 11

A



B

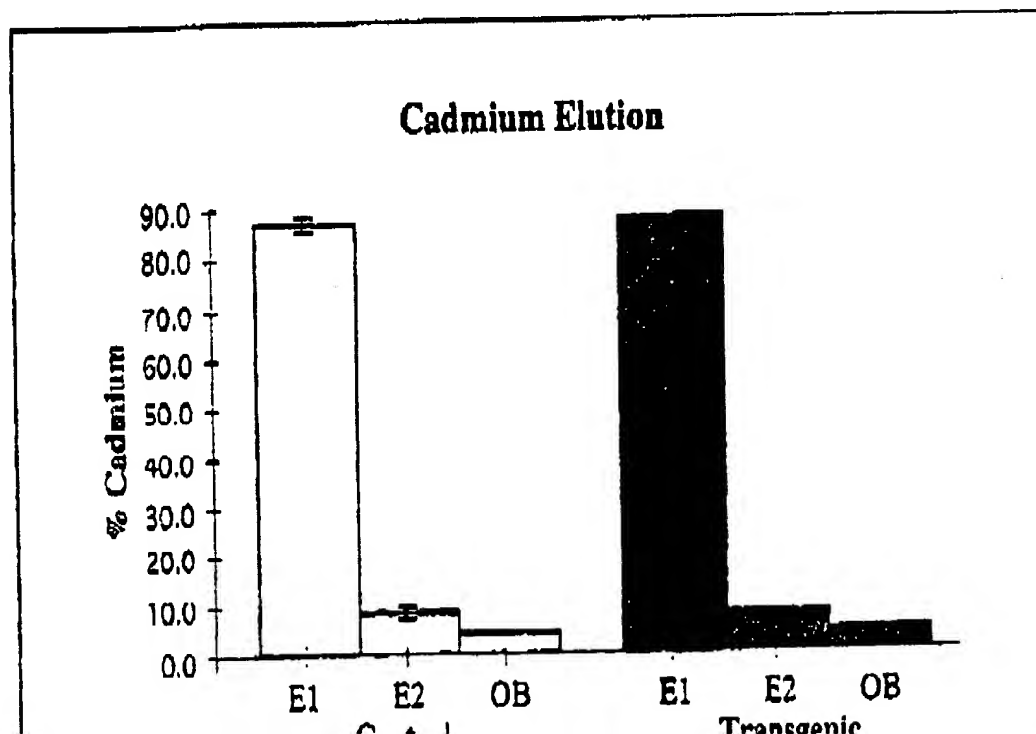


FIGURE 12

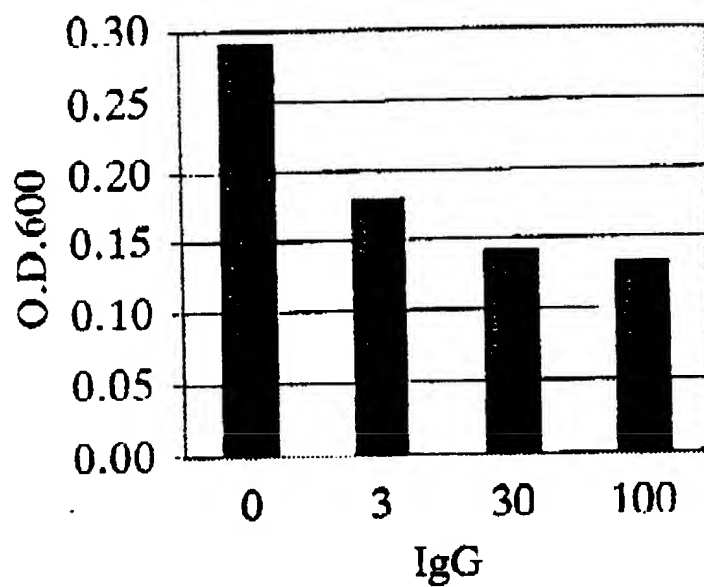


FIGURE 13

1 CTCC ATG GAT CAA CGC AAT GGT TTT ATC CAA AGC CTT AAA GAT GAT CCA AGC CAA AGT GCT 61
 1 M D Q R N G F I Q S L K D D P S Q S A 19
 62 AAC GTT TTA GGT GAA GCT CAA AAA CTT AAT GAC TCT CAA GCT CCA AAA GCT GAT GCG CAA 121
 20 N V L G E A Q K L N D S Q A P K A D A Q 39
 122 CAA AAT AAC TTC AAC AAA GAT CAA CAA AGC GCC TTC TAT GAA ATC TTG AAC ATG CCT AAC 181
 40 Q N N F N K D Q Q S A P Y E I L N M P N 59
 182 TTA AAC GAA GCG CAA CCT AAC GGC TTC ATT CAA AGT CTT AAA GAC GAC CCA AGC CAA AGC 241
 60 L N E A Q R N G F Y Q S L K D D P S Q S 79
 242 ACT AAC GTT TTA GGT GAA GCT AAA AAA TTA AAC GAA TCT CAA GCA CCG AAA GCT GAT AAC 301
 80 T N V L G E A K K L N E S Q A P K A D N 99
 302 AAT TTC AAC AAA GAA CAA CAA AAT GCT TTC TAT GAA ATC TTG AAT ATG CCT AAC TTA AAC 361
 100 N F N K E Q Q N A P Y E Y L N M P N L N 119
 362 GAA GAA CAA CGC AAT GGT TTC ATC CAA AGC TTA AAA GAT GAC CCA AGC CAA AGT GCT AAC 421
 120 E E Q R N G F I Q S L K D D P S Q S A N 139
 422 GTA TTG TGA GAA GCT AAA AAC TTA AAT CAA TCT CAA GCA CCG AAA GCG GAT AAC AAA TTC 481
 140 L L S E A K K L N E S Q A P K A D N K F 159
 482 AAC AAA GAA CAA CAA AAT GCT TTC TAT GAA ATC TTA CAT TTA CCT AAC TTA AAC GAA GAA 541
 160 N K E Q Q N A F Y E I L H L P N L N E E 179
 542 CAA CGC AAT GGT TTC ATC CAA AGC CTA AAA GAT GAC CCA AGC CAA AGC GCT AAC CTT TTA 601
 180 Q R N G F I Q S L K D D P S Q S A N L L 199
 602 GCA GAA GCT AAA AAG CTA AAT GAT GCT CAA GCA CCA AAA GCT GAC AAC AAA TTC AAC AAA 661
 200 A E A K K L N D A Q A P K A D N K F N K 219
 662 CAA CAA CAA AAT CCT TTC TAT GAA ATT TTA CAT TTA CCT AAC TTA ACT GAA GAA CAA CCT 721
 220 E Q Q N A F Y E Y L H L P N L T E E Q R 239
 722 AAC GGC TTC ATC CAA AGC CTT AAA GAC GAT CCG GGG AAT TCC CCG GGA TCC GTC GAC CTG 781
 240 N G F I Q S L K D D P G N S R G S V D L 259
 782 CAG ATA ACA AAT TAG AAGCTTGC 804
 260 Q I T N * HindIII 264

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[illegible][illegible]

FIGURE 14B

1534 CAG GAT CTG AAA GAC AGA GCT CAG TAC TAC GGA CAG CAA CAT ACT GGT GGG GAA CAT GAC 1593
143 Q D L K D R A Q Y Y G Q Q H T G G E H D 162

1594 CGT GAC CGT ACT CGT GGT GGC CAG CAC ACT ACT CTC GTT CCA CGA GGA TCC ATG GAT CAA 1653
163 R D R T R G G Q H T T L Y P R G S M D Q 182

1654 CGC AAT GGT TTT ATC CAA AGC GTT AAA CAT GAT CCA AGC CAA AGT GGT AAC GTT TTA GGT 1713
183 R N G P X Q S L K D D P S Q S A N V L G 202

1714 GAA CCT CAA AAA CTT AAT GAC TCT CAA GCT CCA AAA GCT GAT GCG CAA CAA AAT AAC TTC 1773
203 F A Q K L N D S Q A P K A D A Q Q N N F 222

1774 AAC AAA GAT CAA CAA AGC GGC TTC TAT GAA ATC TTG AAC ATG CCT AAC TTA AAC GAA GCG 1833
223 N K D Q Q S A F Y E I L N M P N L N E A 242

1834 CAA CGT AAC GGC TTC ATT CAA AGT CTT AAA GAC GAC CCA AGC CAA AGC ACT AAC GTT TTA 1893
243 Q R N G F I Q S L K D D P S Q S T N V L 262

1894 GGT GAA GCT AAA AAA TTA AAC GAA TCT CAA GCA CCG AAA COT GAT AAC AAT TTC AAC AAA 1953
263 G E A K K L N E S Q A D K A D N N N F N K 282

1954 CAA CAA CAA AAT GCT TTC TAT GAA ATC TTG AAT ATG CCT AAC TTA AAC GAA CAA CAA CGC 2013
283 F Q Q N A F Y E I L N M P N L N E E Q R 302

2014 AAT GGT TTC ATC CAA AGC TTA AAA GAT GAC CCA AGC CAA AGT GCT AAC CTA TTG TCA GAA 2073
303 N G F I Q S L K D D P S Q S A N L L S E 322

2074 GCT AAA AAG TTA AAT GAA TCT CAA GCA CCG AAA GCG GAT AAC AAA TTC AAC AAA GAA CAA 2133
323 A K K L N E S Q A P K A D N K F N K E Q 342

2134 CAA AAT GCT TTC TAT GAA ATC TTA CAT TTA CCT AAC TTA AAC CAA CAA CAA CCG AAT GCT 2193
343 Q N A F Y E I L H L P N L N E E Q R N G 362

2194 TTC ATC CAA AGC CTA AAA GAT GAT CCA AGC CAA AGC GCT AAC CTT TTA GCA GAA GCT AAA 2253
363 F I Q S L K D D P S Q S A N L L A E A K 382

2254 AAG CTA AAT GAT GCT CAA GCA CCA AAA GCT GAC AAC AAA TTC AAC AAA GAA CAA CAA AAT 2313
383 K L N D A Q A P K A D N K F N K E Q Q N 402

2314 GCT TTC TAT GAA ATT TTA CAT TTA CCT AAC TTA ACT GAA GAA CAA COT AAC GGC TTC ATC 2373
403 A F Y Z I L H L P N L T E E Q R N G F I 422

2374 CAA AGC CTT AAA GAA GAT CCG GGG AAT TCC CGG GGA TCC GTC GAC CTC CAG ATA ACA AAT 2433
423 Q S L K D D F G N S R G S V D L Q I T N 442

2434 TAG aagcttgcatgacgaggtcgcacgttcacacacattctggcacaacattctcttaagattgaatccctgtgacggcgc 2512
443 * 443

2513 ttacgatgattatcatatataattctctgttgattacgttaagcatgttaataattacatgaatgcatgacgttatttatg 2592

2593 agatgggtttttatgattagagtcctcgcaattatcacatttaacacgcgatagaaaaaacatataagcgcgcaaacctagga 2672

2673 taattatcgcgcgggtgtcactcactgacttagat

FIGURE 15

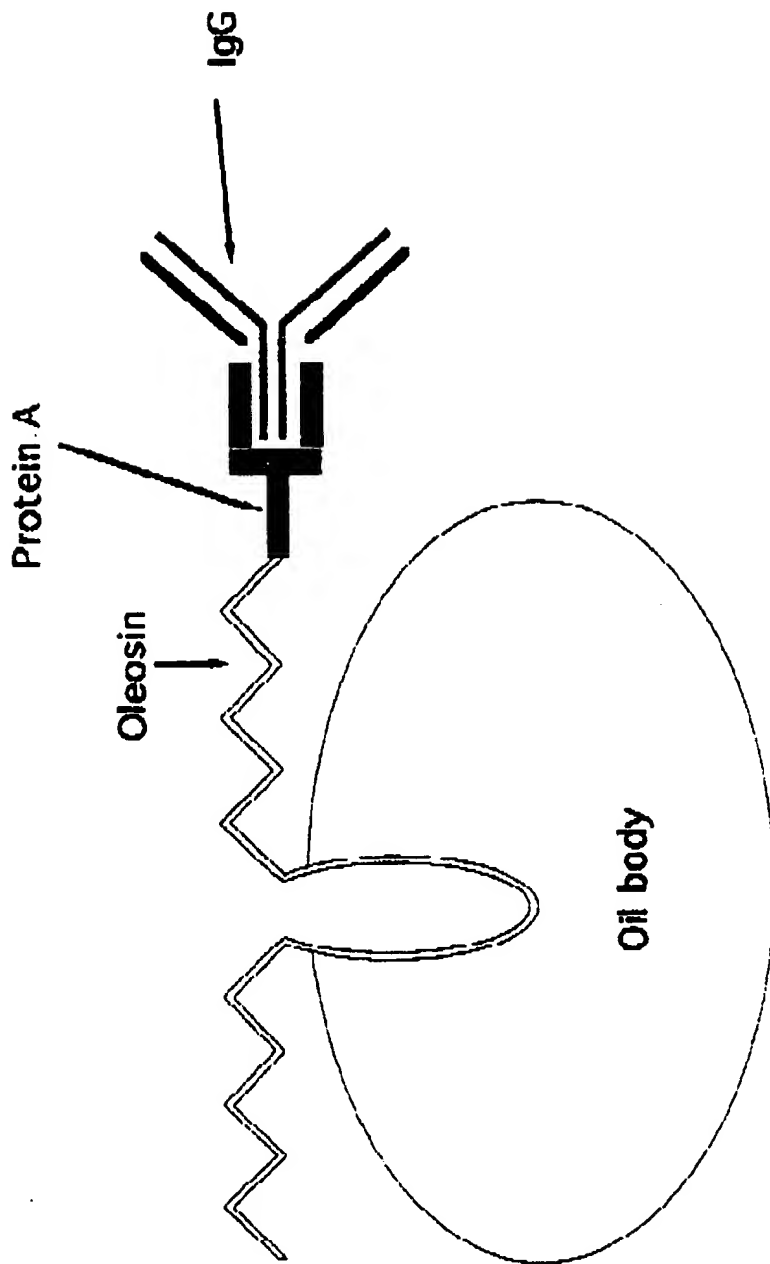


FIGURE 16

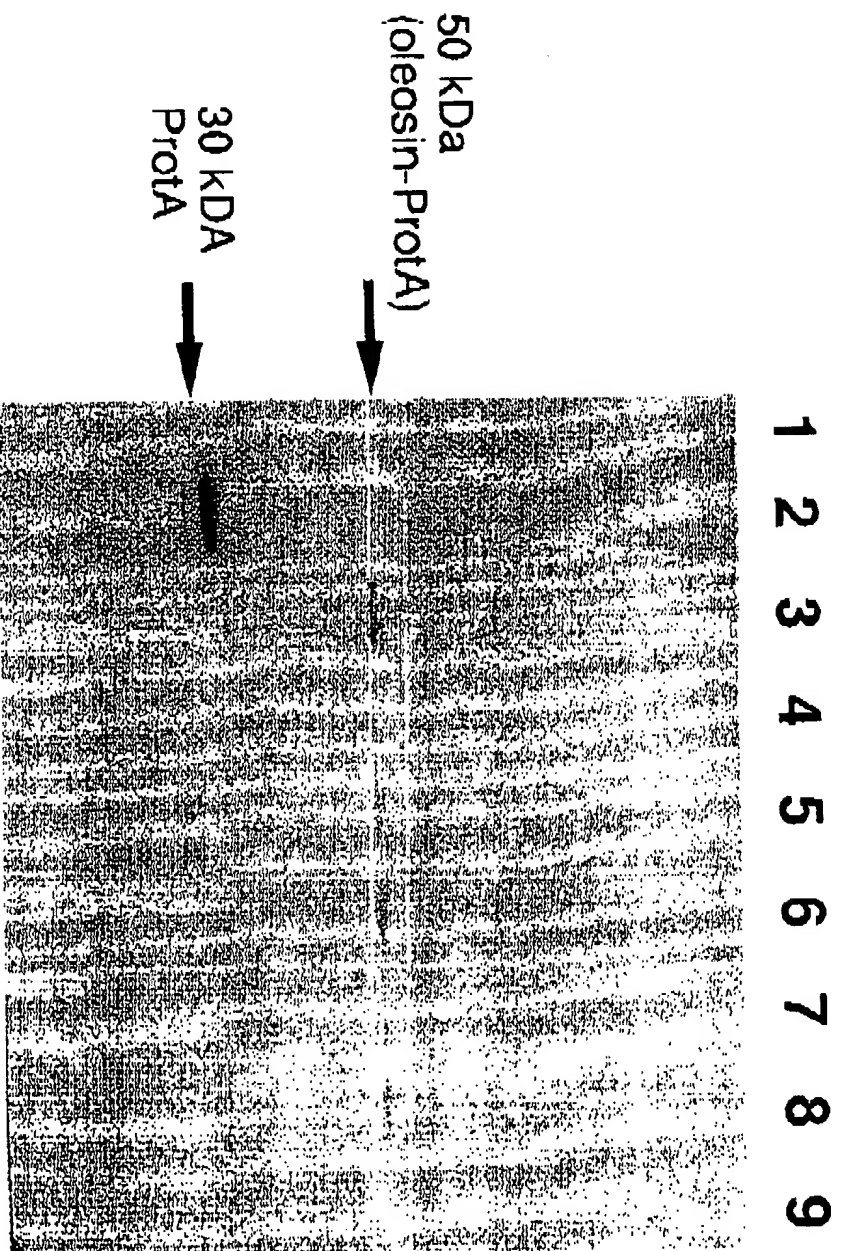
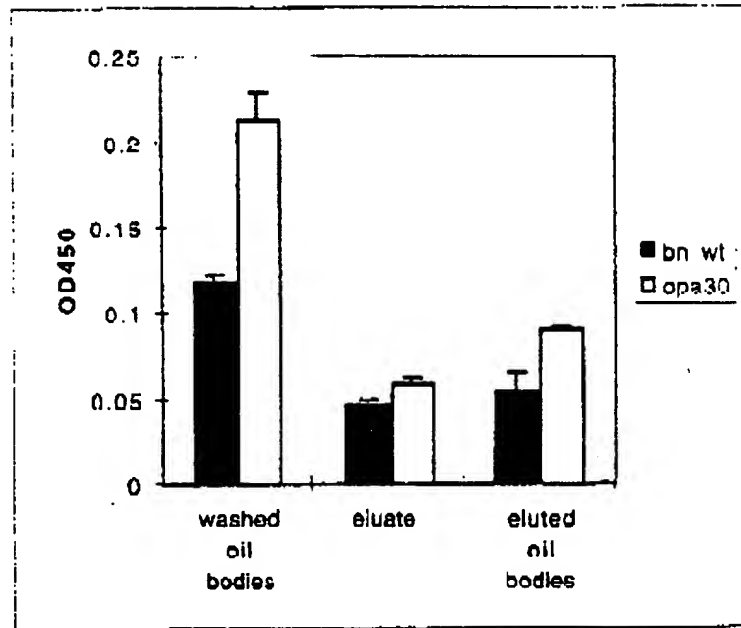


FIGURE 17



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$\frac{d}{dt} \left(\frac{\partial L}{\partial \dot{x}} \right) = \frac{\partial L}{\partial x}$

1 atgaggaactcattgctaccccgylalcatatagtgaagctcttggctctctctctgocgggtggtttttacccctatctta 9C
51 cgggggttttccacccaataaattctgggtacattctctacttacttggtaacttttaattcttcataatcttgggtggaac 160
151 caccacgcttcggcacagutacccacaaaatttatatttcttanacattttcaaacggcataaaaatttatgaagtc 240
241 cgggtatcttcaatctatctaacatttcatattgaatatataatttacttcaatttagcggttggtagaagaagctaa 320
321 agatttct 400
401 lllalalctttaaanaatubcttctacaaabcttcttaaccacgttaactctctctctctctctctctctctctctct 480
481 aatttcaactccataaatttlllalltctgactctttaaagcuaaccccgagtaaacacactagccattttttctcttgaar 560
561 aaaaaaatccaatctacattgtaatttttttatacaaatgaanaatttccacaaatccatcttgggtatttctggacgaa 640
641 gtcagtctatgcasaatttctataattcccatcttgacactacgggaagtaactgaagatctgcttttctatgctgagacac 720
721 ctctcaagtaatttttaataatagttctctatctcaagattctatataccaatactccatctacttcttaaaaaattcaa 800
801 ttaqatataaactaaatatctacttttttcaatttgaagtttaatttggtaatttgggactctgattttattattctactat 880
881 grr 960
961 cataacattct 1040
1041 ctacagtggyltgcacagggcact 1120
1121 adadagacaaaacagagagacuuuoggnatcacaaacacaaactcaatctctctctctctctctctctctctctctct 1200
1201 atgtatgttctaaatgccaatgcacaaagcgcacgyltlllctctgactctctctctctctctctctctctctctct 1280
1281 ucaacatggcctttttct 1360
1361 aacacacgtcaacctgcataatgctgtct 1440
1441 taccataaaataccctctaatatct 1520
1521 cccaaacaaacccatattcaatact 1586
1 M N P L K S P P P F Y A 11
1587 CTC CTT TGT TTT CCT CAA TAC TTC CTT GCT GGT ACT CAC GCT ATG GCC GAG GTG AAG CTG 1646
12 F L C F G Q Y T V A V T H A M A R V K L 31
1647 CAG CAG TCT GGA GCT GAG CTG ATG AAG CCT GGG GCC TCA ATC AAG ATA TCC TCC AAC GCT 1706
32 Q Q S G A E L M K P G A S M K I S C K A 51
1707 ACT GGC TAC ACA TTC ACT AGC TAC TGG ATA GAG TGG GTA AAG CAG AAG CCT GGA CAT GGC 1766
52 T G Y T F S S Y W I E W V K Q R P G H G 71
1767 CTT GAG TGG ATT GGA GAG ATT TTA CCT GGC AGT GGT AGT ACT ACC TAC AAT CAG AAG TTC 1826
72 T M W I C E I L P G S G S T T Y N E K F 91
1827 AAC CCC AAG CCC ACA TTT ATT GCA GAT ACA TCC TCC AAC ACA GCC TAC ATG CAA CTC AGC 1886
92 K G K A T P T A D T S S N T A Y M O L S 111
1887 AGC CTG ACA TCT CAG GAC TCT GCC CTC TAT TAC TCT GCA AGA TGC CAT GTT GAC TCC TGG 1946
112 S L T S E D S A V Y Y C A R L D V D S W 131
1947 GGC CAA GGC ACC ACT CTC ACC GTC TCG ACA GGT GGA GGC GGC TCT GGT GGC GGT GGC ACT 2006
132 G G G T T L T V S T G G G C S G G G G S 151
2007 GGC GGC GGA GGT TCT GAC GTC CTG ATG ACC CAG TCT CCA TCC TCC CTG GCT ATG TCA CTG 2066
152 G G G G S D V V M T Q S P S S L A M S V 171
2067 GGA CAC CGG GTT ACT ATG CGC TGC AAG TCC AGT CAG ACC GTT TTA AAA AGT ACC AAT CAA 2126
172 G Q R V T M R C K S S O S L L K S T N Q 191
2127 AAC AAC TAT TTG GCC TCG TAC CAC CAG AAA CCA CCA CAG TTT GCT AAA CTT CTC GTA TAC 2186
192 K N Y L A W Y Q Q K P G Q E P K L L V V 211
2187 TTT GCA TCC ACT AGG GAA TCT GGG GTC CTT GAT CGC TTC ATA GGC AGT GGA TCT CGC ACA 2246
212 F A S T R E S G V P D R F I G S G S G T 201
2247 GAT TTC ACT CTT ACC ATC AGC ACT CTG CAG GCT GAA GAC CTG CCA GAT TAC TTC TTT CAG 2306
232 D F T L T I S S V Q A E D L A D Y F C Q 251
2307 CAA CAT TAT AAC ACT CTT CCC ACG TTC GGT GCT GGG ACC AAG CTG GAA ATC AAG CGC CTC 2366
252 Q H Y N T P P T F G A G T K L E I K R L 271

1. The first step is to identify the problem or goal. This involves understanding the current situation, identifying the key issues, and determining what you want to achieve.

2267	ATG	GCT	GAG	ATC	ACC	CGC	ATT	CCT	CTC	TAC	AAA	GGT	AAG	TCT	CTC	CGT	AAG	GCG	CTG	AAG	2426
277	M	A	R	T	T	R	I	P	L	V	K	G	K	S	L	R	K	A	L	K	291
2427	GAA	CAT	CGA	CTT	GTA	GAA	GAC	TTC	TTC	CAG	AAA	CAA	CAG	TAT	GGC	ATC	ACC	ACC	AAG	TAC	2486
292	E	H	G	L	L	E	D	F	L	Q	X	Q	Q	V	G	T	S	E	K	Y	311
2487	TCC	GGC	TTC	GGT	GAA	GTT	GCT	AGC	GTG	CCA	CTT	ACC	AAC	TAC	CTT	CAT	AGT	CAA	TAC	TTT	2546
312	S	G	F	G	E	V	A	S	V	P	L	T	N	Y	L	D	D	Q	Y	F	331
2547	GGG	AAG	ATC	TAC	CTC	GCA	ACC	CCG	CCT	CAA	GAG	TTC	AUC	GTT	CAC	TTT	GAT	ACT	GGT	TCC	2606
332	G	K	I	Y	L	G	T	P	P	Q	E	F	T	V	L	F	D	T	G	S	351
2607	TCT	GAC	TTC	TGG	GTT	CCC	ICT	ATC	TAC	TGC	AAG	AGC	AAT	CCC	TGC	AAG	AAC	CAC	CAA	AGA	2666
352	R	D	F	W	V	P	S	I	Y	C	R	S	N	A	C	K	N	H	Q	R	371
2667	TTC	GAT	CCG	ACA	AAG	TGC	TCC	ACC	TTC	CAG	AAC	TTA	GGC	AAA	CCC	TTG	TCT	ATA	CAC	TAC	2726
372	P	D	P	R	K	S	S	T	F	Q	N	L	G	K	P	L	S	I	H	Y	391
2727	GGT	ACA	GGT	AGC	ATG	CAA	GGA	ATC	TTA	CCC	TAT	GAT	ACC	CTC	ACT	GTC	TCC	AAC	ATT	CTC	2786
392	G	T	G	S	M	Q	G	I	L	G	Y	D	T	V	T	V	S	N	I	V	411
2787	GAC	ATT	CAA	CAG	ACA	GTA	GGA	CTT	AGC	AUC	CAA	GAA	CCA	GST	GAT	GTC	TTC	ACC	TAT	GCA	2846
412	D	I	O	Q	T	V	G	L	S	T	Q	E	P	G	D	V	F	T	Y	A	431
2847	GAA	TTC	GAT	GCC	ATC	CTT	GGT	ATG	GCA	TAC	CCA	TGG	CTC	GCG	TCA	GAG	TAC	TCC	ATA	CCT	2906
432	E	P	D	G	I	L	G	M	A	Y	P	S	L	A	S	E	Y	S	I	P	451
2907	CTG	TTT	GAC	AAC	ATG	ATG	AAC	CGA	CAC	CTA	GTA	GCT	CAA	GAC	TTG	TTC	CCG	GTT	TAC	ATG	2966
452	V	F	D	N	M	M	N	R	H	L	V	A	Q	D	L	F	S	V	Y	M	471
2967	GAC	AGG	AAT	GGC	CAG	GAG	AGC	ATC	CTC	ACC	CTT	GGA	CCT	ATT	GAT	CCA	TCC	TAC	TAC	ACA	3026
472	D	R	K	Q	Q	E	S	M	L	T	L	G	A	I	D	P	S	Y	Y	T	491
3027	GGA	TCT	CTT	CAC	TGG	GTT	CCA	GTC	ACT	GTC	CAG	CAG	TAC	TGG	CAA	TTC	ACT	GTC	GAC	ACT	3086
492	G	S	L	H	W	V	P	V	T	V	Q	Q	Y	W	Q	F	T	V	D	S	511
3087	GTC	ACC	ATC	AGC	GOT	GTG	GTT	CTT	GCA	TGT	GAA	GGT	GGA	TGT	CAA	CCT	ATC	TTG	GAT	ACC	5146
512	V	T	I	S	G	V	V	V	A	C	E	G	G	C	Q	A	I	L	D	T	531
3147	GCT	ACC	TCC	AAG	CTG	GTC	GGA	CCT	AGC	AGC	GAC	ATT	CTC	AAC	ATT	CAG	CAA	GCT	ATT	GGA	3206
532	C	T	S	K	L	V	G	P	S	S	D	I	L	N	I	Q	Q	A	I	G	551
3207	CCC	ACA	CAG	AAC	CAC	TAC	CCT	GAG	TTC	GAC	ATA	GAT	TGC	GAC	AAC	CTT	AGC	TAC	ATG	CCT	3266
552	A	T	Q	N	Q	Y	G	R	F	D	I	D	C	D	N	L	S	Y	M	P	

FIGURE 18C

4080 aatcttatttctctctctcagataaaaaaanaaattatcaggttggrrtgatanaatttgeaggatctaaaataataataa 4159
4160 caataaaraarnraaataatatctatataaaattatctataataataaatttactataanaaaagttaacattgtcataaa 4239
4240 cctatucuaatogtttagccttgcctggacgactctcarrfrrfnaacguyagttaaacatatttgaacttttgggttattta 4319
4320 acaaatcttcttcllaucactatatgcaatcttct 4399
4400 gtgtcccaatccttatacaaccaacttct 4479
4480 aatttgggttgtcttgtttgtgtgcataatttctgcagtaaaacactacacataaacccttctctctctctctctctct 4559
4560 accgtgtgcttagcttct 4639
4640 tcaucccttatcaaaaacccccaaaacaggttctctagcaccctaccacactaaggtacc 4678

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